

**L-06**

**Mon. 16. 06., 15<sup>40</sup>-16<sup>20</sup>**

**Structural dynamics investigated by coherent X-ray scattering**

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In the talk I introduce the concept of X-ray coherence with respect to scattering experiments. A high flux of coherent X-rays is available since the mid 90ies at modern synchrotron sources with low emittance and high brightness, or more recently at free-electron laser sources. Coherent scattering has advantages over “regular” scattering experiments when it comes to studies of structure and dynamics. In the talk the coherent scattering technique X-ray Photon Correlation Spectroscopy (XPCS) is introduced [1,2]. XPCS allows studies of structural dynamics in a wide range of systems and in different scattering geometries. Examples of recent applications are given as well as an outlook to the bright future.

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- [1] G. Grübel, A. Madsen, and A. Robert, X-Ray Photon Correlation Spectroscopy (XPCS) in Soft Matter Characterization, Borsali & Pecora (Eds.), Springer (2008) 953-995; [http://link.springer.com/referenceworkentry/10.1007%2F978-1-4020-4465-6\\_18](http://link.springer.com/referenceworkentry/10.1007%2F978-1-4020-4465-6_18)
- [2] A. Madsen, R. L. Leheny, H. Guo, M. Sprung and O. Czakkel, *New Journal of Physics* **12** (2010) 055001.

**L-07**

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**X-ray scattering methods for the study of disordered systems. New opportunities and challenges**

I. Vartaniants